

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A monochromator comprising:

an optical ray input section which limits the width of optical rays input from a light source,

a first concave mirror for converting the optical rays passing through the optical ray input section into parallel rays,

a diffraction grating for separating the parallel rays by wavelength into diffracted rays,

a second concave mirror for condensing the diffracted rays when the diffracted rays are input,

an optical ray output section which limits a wavelength band width of the condensed rays, and

a substrate to which the optical ray input section, the first concave mirror, the diffraction grating, the second concave mirror, and the optical ray output section are fixed;

wherein the first and second concave mirrors are formed of a first material and said substrate is formed of a second material different from said first material, a coefficient of linear expansion of a focal length of the first concave mirror, a coefficient of linear expansion of a focal length of the second concave mirror, and a coefficient of linear expansion of a the second material forming the substrate are approximately the same.

Claims 2.-4. (Canceled).

5. (Original) The monochromator according to claim 1, wherein at least one of the optical ray input section and the optical ray output section is a slit.

6. (Original) A monochromator comprising:
a slit to limit a width of optical rays input from a light source,
a concave mirror to convert the optical rays passing through the slit into parallel rays,
a diffraction grating to separate the parallel rays into diffracted rays by wavelength,
and
a substrate to which the slit, the concave mirror, and the diffraction grating are fixed;
wherein the concave mirror condenses the diffracted rays when the diffracted rays
are input, and the slit limits a wavelength band width of the condensed rays;
wherein a coefficient of linear expansion of a focal length of
the concave mirror and a coefficient of linear expansion of a material
forming the substrate are approximately the same.

Claim 7. Canceled.

8. (Original) The monochromator according to claim 6, wherein the material
forming the substrate is a composite of aluminum and ceramic.

9. (Original) An optical spectrum analyzer comprising the monochromator
according to claim 1.

10. (Original) An optical spectrum analyzer comprising the monochromator
according to claim 6.

11. (Canceled).

12. (Previously presented) The monochromator according to claim 1 wherein the first and second concave mirrors are of glass material.

13. (Canceled).

14. (Currently amended) The monochromator according to claim 12, wherein the material forming the substrate is a composite of aluminum and ceramic.

15. (Previously presented) The monochromator according to claim 6, wherein the concave mirror is of glass material.

Claims 16.-17. (Canceled).

18. (Currently amended) A monochromator comprising:
an optical ray input section which limits the width of optical rays input from a light source,
a first concave mirror for converting the optical rays passing through the optical ray input section into parallel rays,
a diffraction grating for separating the parallel rays by wavelength into diffracted rays,
a second concave mirror for condensing the diffracted rays when the diffracted rays are input,
an optical ray output section which limits a wavelength band width of the condensed rays, and

a substrate formed of a composite of aluminum and ceramic to which the optical ray input section, the first concave mirror, the diffraction grating, the second concave mirror, and the optical ray output section are fixed;

wherein a coefficient of linear expansion of a focal length of the first concave mirror, a coefficient of linear expansion of a focal length of the second concave mirror, and a coefficient of linear expansion of ~~a material~~ the composite of aluminum and ceramic forming the substrate are approximately the same.

Claim 19. Canceled.

20. (Currently amended) A monochromator comprising:

an optical ray input section which limits the width of optical rays input from a light source,

a first concave mirror for converting the optical rays passing through the optical ray input section into parallel rays,

a diffraction grating for separating the parallel rays by wavelength into diffracted rays,

a second concave mirror for condensing the diffracted rays when the diffracted rays are input,

an optical ray output section which limits a wavelength band width of the condensed rays, and

a substrate formed of a composite of aluminum and ceramic to which the optical ray input section, the first concave mirror, the diffraction grating, the second concave mirror, and the optical ray output section are fixed;

wherein the first and second concave mirrors are of glass materials ~~and aluminum and ceramic~~; and

wherein a coefficient of linear expansion of a focal length of the first concave mirror, a coefficient of linear expansion of a focal length of the second concave mirror, and a coefficient of linear expansion of ~~a material~~ the composite of aluminum and ceramic forming the substrate are approximately the same; ~~and~~

~~the difference between the coefficients of linear expansion of the first and second concave mirrors and the material of the substrate is equal to or less than $10 \times 10^{-6} / ^\circ\text{C}$.~~

21. (Currently amended) A monochromator comprising:

~~an optical ray input section which limits the~~ a slit for limiting a width of optical rays input from a light source,

a ~~first~~ concave mirror for converting the optical rays passing through the ~~optical ray input section~~ slit into parallel rays,

a diffraction grating for separating the parallel rays by wavelength into diffracted rays,

~~a second concave mirror for condensing the diffracted rays when the diffracted rays are input,~~

~~an optical ray output section which limits a wavelength band width of the condensed rays, and~~

a substrate formed of a composite of aluminum and ceramic to which the ~~optical ray input section~~ slit, the ~~first~~ concave mirror, and the diffraction grating, ~~the second concave mirror, and the optical ray output section~~ are fixed; and

wherein the concave mirror condenses the diffracted rays when the diffracted rays are input, and the slit limits a wavelength band width of the condensed rays;

wherein the ~~first and second concave mirrors are~~ mirror is of glass material ~~and the material forming the substrate is a composite of aluminum and ceramic;~~

wherein a coefficient of linear expansion of a focal length of the ~~first~~ concave mirror; ~~a coefficient of linear expansion of a focal length of the second concave mirror;~~ and a coefficient of linear expansion of ~~a material~~ the composite of aluminum and ceramic forming the substrate are approximately the same; ~~and~~

~~wherein the difference between the coefficients of linear expansion of the concave mirrors and the material of the substrate is equal to or less than $10 \times 10^{-6} / ^\circ\text{C}$.~~

22. (New) A monochromator comprising:

a slit to limit a width of optical rays input from a light source,

a concave mirror to convert the optical rays passing through the slit into parallel rays,

a diffraction grating to separate the parallel rays into diffracted rays by wavelength,

and

a substrate to which the slit, the concave mirror, and the diffraction grating are fixed;

wherein the concave mirror condenses the diffracted rays when the diffracted rays are input, and the slit limits a wavelength band width of the condensed rays;

wherein a coefficient of linear expansion of a focal length of the concave mirror and a coefficient of linear expansion of a material forming the substrate are approximately the same.

23. (New) The monochromator according to claim 6, wherein the concave mirror is of glass material.

24. (New) The monochromator according to claim 16, wherein the material forming the substrate is a composite of aluminum and ceramic.

AMENDMENTS TO THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 2 by adding PRIOR ART .

Attachment: Replacement sheet